

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A power semiconductor module with a housing comprising:

a hardenable plastic casting compound and a base plate,

wherein electric power semiconductor components are arranged on a section of a surface of the base plate that faces the housing by means of an insulating layer,

wherein at least the section of the surface of the base plate that faces the housing and contains the electric power semiconductor components is encapsulated in the housing,

wherein the hardenable plastic casting compound has a hardness between 30 and 95 ShoreA, and wherein the hardenable plastic casting compound includes a thermoplastic hot-melt adhesive,

wherein a control device is connected to at least one of the electric power semiconductor components and at least partially encapsulated in the housing,

wherein the control device contains a printed circuit board with a first circuit board side that faces the electric power semiconductor components and a second circuit board side that faces away from the electric power semiconductor components, and

wherein the first circuit board side is encapsulated in the housing, and
wherein the second circuit board side lies outside the housing.

2. (Previously Presented) The power semiconductor module according to Claim 1, wherein the hardenable plastic casting compound has a coefficient of linear expansion between 40 and 300 ppm/°K and a flexural modulus between 100 kPa and 2 GPa.

3. (Previously Presented) The power semiconductor module according to Claim 1, wherein the hot-melt adhesive contains a dimeric fatty acid polyamide.

4. (Previously Presented) The power semiconductor module according to Claim 1, wherein the hot-melt adhesive has a casting temperature between 150 °C and 220 °C.

5. (Previously Presented) The power semiconductor module according to Claim 1, wherein the hot-melt adhesive can be cast with a casting pressure between 0.1 MPa and 0.5 MPA.

6. (Previously Presented) The power semiconductor module according to Claim 1, wherein the hardenable plastic casting compound is essentially transparent in the hardened state.

7-9. (Cancelled)

10. (Previously Presented) The power semiconductor module according to Claim 1, wherein the second circuit board side is thermally coupled with a cooling element.

11. (Previously Presented) The power semiconductor module according to Claim 1, wherein control link elements connected to the control device are encapsulated in the housing and the terminal ends of the control link elements lead out of the housing.

12. (Previously Presented) The power semiconductor module according to Claim 11, wherein the control link elements are realized in the form of cables.

13. (Previously Presented) The power semiconductor module according to Claim 1, wherein at least one power link element is connected to at least one of the electric power semiconductor components and encapsulated in the housing, wherein a terminal end of the at least one power link element leads out of the housing, and wherein at least one power link element is realized in the form of a cable.

14. (Currently Amended) A power semiconductor module comprising:
a housing having a base plate and a casting compound;
at least one electric power semiconductor component arranged on a surface of the base plate; and

a control device connected to the at least one electric power semiconductor component and at least partially encapsulated in the housing,

wherein the housing encapsulates at least part of the surface of the base plate on which the at least one electric power semiconductor component is arranged, and

wherein the control device comprises a printed circuit board with a first circuit board side that faces toward the at least one electric power semiconductor component and a second circuit board side that faces away from the at least one electric power semiconductor component, ~~component such that the first circuit board side is encapsulated in the housing and the second circuit board side lies outside the housing~~

wherein the first circuit board side is encapsulated in the housing, and

wherein the second circuit board side lies outside the housing.

15. (Previously Presented) The power semiconductor module according to Claim 15, wherein the at least one electric power semiconductor component is arranged directly on the surface of the base plate that faces the housing.

16. (Previously Presented) The power semiconductor module according to Claim 14, comprising an insulating layer interposed between the at least one power semiconductor component and the surface of the base plate.

17. (Previously Presented) The power semiconductor module according to Claim 16, wherein the insulating layer is encapsulated within the housing.

18. (Previously Presented) The power semiconductor module according to Claim 14, wherein the casting compound is a hardenable plastic casting compound with a hardness between 30 and 95 ShoreA, and wherein the hardenable plastic casting compound includes a thermoplastic hot-melt adhesive.

19. (Cancelled)

20. (Previously Presented) The power semiconductor module according to Claim 14, wherein the at least one electric power semiconductor component is interposed between the printed circuit board and the base plate.